Proceedings (Plant Sciences)

Volume 95, 1985

SUBJECT INDEX

Achyranthes aspera
Ontogeny of cambium in *Amaranthus caudatus* L. and *Achyranthes aspera* L. 1
Acid soils
Effect of graded doses of molybdenum on the yield and uptake of molybdenum by soybean in some acid soils of Himachal Pradesh 341
Acquired resistance
Acquired cycloheximide resistance in *Neurospora crassa* and *Sclerotium rolfsii* 417
Aglaothamnion cordatum
Spore shedding in *Aglaothamnion cordatum* (Borgesen) Feldmann. Mazoyer—(Rhodophyta, Ceramiales) of Visakhapatnam coast 121
Agromyzid
On the developmental morphology and histochemistry of the galls induced by an agromyzid on the stems of *Pongamia glabra* Vent. (Fabaceae) 95
Air pollution stress
Succinate dehydrogenase and peroxidase activities in leaf epidermis and stem of some angiosperm species growing near a fertilizer complex 129
Algae
Ecological studies in the paper mill effluents and their impact on the river Tungabhadra: Heavy metals and algae 139
Alum
Fractional coagulation of proteins from alfalfa leaf juice by use of alum 47
Amaranthus caudatus
Ontogeny of cambium in *Amaranthus caudatus* L. and *Achyranthes aspera* L. 295
Amino acids
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203
Amylase proteins
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203
Anatomy
Cotyledonary architecture in some Asteraceae 7
Andromonoecy
Reproductive biology of *Torilis arvensis* (Hudson) Link 227
Antheridiogen
A new antheridiogen from the fern *Pityrogramma calomelanos* (L.) Link 173
Apit
A new antheridiogen from the fern *Pityrogramma calomelanos* (L.) Link 173
Apt
A new antheridiogen from the fern *Pityrogramma calomelanos* (L.) Link 173
Arachis hypogaea
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357
Asclepiadaceae
Seedling anatomy of some Asclepiadaceae 147
Asteraceae
Cotyledonary architecture in some Asteraceae 7
Available molybdenum
Effect of graded doses of molybdenum on the yield and uptake of molybdenum by soybean in some acid soils of Himachal Pradesh 341
Azospirillum inoculation
Interactions between the root exudates of pearl millet and *Azospirillum brasilense* 237

Basidia (2- or 4-spored)
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Biomass
Effect of nitrogen fertilizer on biomass and growth behaviour of two range grasses 41
Biophytum
Seed morphology in five species of *Biophytum* DC (Oxalidaceae) 17
Bipolaris sorokiniana
Induction of hyphal branching in *Bipolaris sorokiniana* by sodium chloride 65
Bryophyta
Cololejeunea (*Pedinolejeunea*) *furcilobulata* (Berrie *et* Jones) Schuster: New to Asia 303
The Status of *Plagiochasma intermedium* L. et G. in India 365

Cajanus cajan
Effect of sulphur dioxide on growth and nodulation of pigeonpea 199
Calamintha umbrosa
Contribution to the embryology of *Calamintha umbrosa* Benth. 291
Cambium ontogeny
Ontogeny of cambium in *Amaranthus caudatus* L. and *Achyranthes aspera* L. 295

Carbohydrates
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203
Cell membrane permeability
Activity of isoproturon on leaf cell membrane permeability 405
Chick pea
Relationship of developing pods with photosynthetic characteristics of leaves in chick pea 333
Chlorocholine chloride
Stomatal response of chlorocholine chloride and indole-3-acetic acid in *Commelina communis* L. 167
Chloroplast envelope membrane RCA_1-induced agglutination
RCA_1-mediated agglutination and fluidity of *Mimosa pudica* chloroplast envelope membrane 437
Clipping
Influence of clipping and water stress on growth performance and nutrient value of four range grasses 389
Cocosoid palm
Contributions to the anatomy of palm fruits 153
Cololejeunea (*Pedinolejeunea*) *furcilobulata*
Cololejeunea (*Pedinolejeunea*) *furcilobulata* (Berrie *et* Jones) Schuster: New to Asia 303
Commelina communis L.
Stomatal response of chlorocholine chloride and indole-3-acetic acid in *Commelina communis* L. 167
Compositae
Cytological studies in *Sonchus oleraceous* Linn 373
Corrugation
Comparative study on the seed of two major pulses vis-a-vis their common adulterant 283
Cotyledonary architecture
Cotyledonary architecture in some Asteraceae 7
Cotyledonary middle piece
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
Cotyledonary node
Seedling anatomy of some Asclepiadaceae 147
Crotonothrips
Cecidogenous *Crotonothrips* (Thysanoptera)—*Memecylon* interactions: Host relations, nutritive tissue, tissue dynamics and cecidogenetic patterns 103
Cunoniaceae
The veinsheath syndrome in Cunoniaceae I *Pancheria* Brongn. & Gris 87
The veinsheath syndrome in Cunoniaceae. II. The genera *Acsmithia*, *Codia*, *Cunonia*, *Geissois*, *Pullea* and *Weinmannia* 247
Cyanobacteria
Influence of combined nitrogen on growth of cyanobacteria 315
Cycloheximide
Acquired cycloheximide resistance in *Neurospora crassa* and *Sclerotium rolfsii* 417
Cytology
Cytological studies in *Sonchus oleraceous* Linn. 373

Datura inoxia
Leaf-litter decomposition in arid to semi-arid climatic conditions 409
Decomposition
Leaf-litter decomposition in arid to semi-arid climatic conditions 409
Desmids
Environmental control of cell morphology in desmids 193
Developmental morphology
On the developmental morphology and histochemistry of the galls induced by an agromyzid on the stems of *Pongamia glabra* Vent. (Fabaceae) 95
Dicot leaf ontogeny
Ontogeny of palmately compound leaves in angiosperms: 1. *Tabebuia pentaphylla* Hense 429
DNA
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203
Dormancy
Variation in germination characteristics of some seed origins of *Pinus wallichiana* A B Jacks from the Western Himalaya 441
Dry matter accumulation
Effect of sulphur dioxide on growth and nodulation of pigeonpea 199

Eastern Himalaya
Genus *Ramaria* in the eastern Himalaya: Subgenus *Laeticolora*-I 271
The genus *Ramaria* in the Eastern Himalayas: Subgenera *Ramaria*, *Echinoramaria* and *Lentoramaria* 51
Ecology
Environmental control of cell morphology in desmids 193
Electrolyte leakage
Activity of isoproturon on leaf cell membrane permeability 405
Embryo
Gametophytes, integument initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379
Embryogeny
Contribution to the embryology of *Calamintha umbrosa* Benth. 291

Embryology
Embryological studies in Gentianaceae 213
Enicostema hyssopifolium
Embryological studies in Gentianaceae 213
Epidermis
Succinate dehydrogenase and peroxidase activities in leaf epidermis and stem of some angiosperm species growing near a fertilizer complex 129
Exacum saulieri
Embryological studies in Gentianaceae 213

Flavonoids
Impact of polyploidy on flavonoid constitution in *Narcissus tazetta* L. 1
Fractional precipitation
Fractional coagulation of proteins from alfalfa leaf juice by use of alum 47

Free sugars
Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L) 71
Fruit structure
Contributions to the anatomy of palm fruits 153
Fungi
Fungi of wastewaters and stabilisation pond 263

Galinsoga spp
Effect of established populations of two annual weeds on their newly emerged seedling cohorts 79
Gall
Cecidogenous *Crotonothrips* (Thysanoptera)—*Memecylon* interactions: Host relations, nutritive tissue, tissue dynamics and cecidogenetic patterns 103
Galls
On the developmental morphology and histochemistry of the galls induced by an agromyzid on the stems of *Pongamia glabra* Vent. (Fabaceae) 95
Gametogenesis
Contribution to the embryology of *Calamintha umbrosa* Benth. 291
Gametophytes
Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379
Geitonogamy
Reproductive biology of *Torilis arvensis* (Hudson) Link. 227
Gentianaceae
Embryological studies in Gentianaceae 213
Germination
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
Glomus mosseae
Response of groundnut (*Arachis hypogaea* L) to combined inoculation with *Glomus mosseae* and *Rhizobium* sp 35
Gossypium hirsutum
The interrelationship of growth substance and stomatal characters in *Gossypium hirsutum* var H-777 21
Grain weight
Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L) 71
Grasses
Effect of nitrogen fertilizer on biomass and growth behaviour of two range grasses 41
Groundnut (*Arachis hypogaea* L)
Response of groundnut (*Arachis hypogaea* L) to combined inoculation with *Glomus mosseae* and *Rhizobium* sp 35
Groundnut
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357
Growth performance
Influence of clipping and water stress on growth performance and nutrient value of four range grasses 389
Growth rate
Influence of combined nitrogen on growth of cyanobacteria 315
Growth substances
The interrelationship of growth substances and stomatal characters in *Gossypium hirsutum* var H-777 21
GS/GOGAT pathway
Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) 181

Heavy metals
Ecological studies in the paper mill effluents and their impact on the river Tungabhadra: Heavy metals and algae 139
Hepaticae
Cololejeunea (*Pedinolejeunea*) *furcilobulata* (Berrie *et* Jones) Schuster: New to Asia 303
The Status of *Plagiochasma intermedium* L. et G. in India 365
Histochemistry
On the developmental morphology and histochemistry of the galls induced by an agromyzid on the stems of *Pongamia glabra* Vent. (Fabaceae) 95
Zonation in the shoot apex of *Matthiola incana* R. Br. 349
Host relations
Cecidogenous *Crotonothrips* (Thysanoptera)—*Memecylon* interactions: Host relations, nutritive tissue, tissue dynamics and cecidogenetic patterns 103

Hyphal branching
Induction of hyphal branching in *Bipolaris sorokiniana* by sodium chloride 65
Hypocotyl
Unusual germination and seedling development in two monocotyledonous dicotyledons 221

Illumination
Environmental control of cell morphology in desmids 193
Indigofera
Structure, distribution and taxonomic significance of trichomes in some *Indigofera* L. (Fabaceae) 309
Indoleacetic acid
Stomatal response of chlorocholine chloride and indole-3-acetic acid in *Commelina communis* L. 167
Inflorescence apex
Zonation in the shoot apex of *Matthiola incana* R. Br. 349
Integuments initiation
Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379
Ion efflux
Activity of isoproturon on leaf cell membrane permeability 405
Isoproturon
Activity of isoproturon on leaf cell membrane permeability 405

Jojoba
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203

Kail
Variation in germination characteristics of some seed origins of *Pinus wallichiana* A B Jacks from the western Himalaya 441

Laccaria
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Laccaria laccata
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Laccaria ohiensis
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Laccaria proxima
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Laccaria tortilis
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Leaf ontogeny
Ontogeny of palmately compound leaves in angiosperms: I. *Tabebuia pentaphylla* Hense 429
Leaf proteins
Fractional coagulation of proteins from alfalfa leaf juice by use of alum 47
Legume
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357
Lumen
Comparative study on the seed of two major pulses vis-a-vis their common adulterant 283

Macromolecular markers
Role of endogenous phytohormones and some macromolecules in regulation of sex differentiation in flowering plants 453
Macrosclereids
Comparative study on the seed of two major pulses vis-a-vis their common adulterant 283
Marchantiales
The Status of *Plagiochasma intermedium* L. et G. in India 365
Mean relative decomposition rate
Leaf-litter decomposition in arid to semi-arid climatic conditions 409
Memecylon
Cecidogenous *Crotonothrips* (Thysanoptera)—*Memecylon* interactions: Host relations, nutritive tissue, tissue dynamics and cecidogenetic patterns 103
Mesocotyl
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
Microstylis cylindrostachya
Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379
Mimosa pudica
RCA_1-mediated agglutination and fluidity of *Mimosa pudica* chloroplast envelop membrane 437
Morphological characteristics
Effect of sulphur dioxide on growth and nodulation of pigeonpea 199
Morphology
Environmental control of cell morphology in desmids 193

Narcissus tazetta
Impact of polyploidy on flavonoid constitution in *Narcissus tazetta* L 1
Net photosynthesis rate
Relationship of developing pods with photo-

synthetic characteristics of leaves in chick pea 333

Neurospora
Acquired cycloheximide resistance in *Neurospora crassa* and *Sclerotium rolfsii* 417

Nitrate reductase inactivating factor
Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) 181

Nitrate reduction
Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) 181

Nitrogenase activity
Interactions between the root exudates of pearl millet and *Azospirillum brasilense* 237

Nitrogen fertilizer
Effect of nitrogen fertilizer on biomass and growth behaviour of two range grasses 41

Nodulation
Effect of sulphur dioxide on growth and nodulation of pigeonpea 199

Nymphaea
Unusual germination and seedling development in two monocotyledonous dicotyledons 221

Nymphaea lotus Auct var *pubescens* (Willd) HK.f. and Th.
Unusual germination and seedling development in two monocotyledonous dicotyledons 221

Orchidaceae
Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379

Osteosclereids
Comparative study on the seed of two major pulses vis-a-vis their common adulterant 283

Palmately compound leaf
Ontogeny of palmately compound leaves in angiosperms: 1. *Tabebuia pentaphylla* Hense 429

Palm fruits
Contributions to the anatomy of palm fruits 153

Pancheria
The veinsheath syndrome in *Cunoniaceae* I *Pancheria* Brongn. & Gris. 87

Paper mill effluents
Ecological studies in the paper mill effluents and their impact on the river Tungabhadra: Heavy metals and algae 139

Pearl millet
Interactions between the root exudates of pearl millet and *Azospirillum brasilense* 237

Pericarp
Contribution to the embryology of *Calamintha umbrosa* Benth. 291
Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379

Peroxidase
Succinate dehydrogenase and peroxidase activities in leaf epidermis and stem of some angiosperm species growing near a fertilizer complex 129

Phase transition
RCA_1-mediated agglutination and fluidity of *Mimosa pudica* chloroplast envelop membrane 437

pH
Environmental control of cell morphology in desmids 193

Phenology
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203

Phytohormones
Role of endogenous phytohormones and some macromolecules in regulation of sex differentiation in flowering plants 453

Pigmentation and oxygen evolution
Influence of combined nitrogen on growth of cyanobacteria 315

Pinus wallishiana
Variation in germination characteristics of some seed origins of *Pinus wallishiana* A B Jacks from the Western Himalaya 441

Pistil
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357

Plagiochasma
The Status of *Plagiochasma intermedium* L. et. G. in India 365

Pod growth
Relationship of developing pods with photosynthetic characteristics of leaves in chick pea 333

Pollen-pistil interaction
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357

Polyploidy
Impact of polyploidy on flavonoid constitution in *Narcissus tazetta* L 1

Ponni
Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) 181

Population regulation
Effect of established populations of two annual weeds on their newly emerged seedling cohorts 79

Prechilling
Variation in germination characteristics of some seed origins of *Pinus wallichiana* A B Jacks from the western Himalaya 441

Protandry
Reproductive biology of *Torilis arvensis* (Hudson) Link. 227

Protein content
Influence of clipping and water stress on growth performance and nutrient value of four range grasses 389
Protein from leaves
Fractional coagulation of proteins from alfalfa leaf juice by use of alum 47
Puccinia graminis tritici
A proposed system for virulence designation in India. 2. *Puccinia graminis* f sp *tritici* 29

Q values
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321

Ramaria
The genus *Ramaria* in the Eastern Himalayas: Subgenera *Ramaria*, *Echinoramaria* and *Lentoramaria* 51
Genus *Ramaria* in the eastern Himalaya: Subgenus *Laeticolora*-I 271
Rebouliaceae
The Status of *Plagiochasma intermedium* L. et G. in India 365
Rhizobium sp
Response of groundnut (*Arachis hypogaea* L) to combined inoculation with *Glomus mosseae* and *Rhizobium* sp 35
River Tungabhadra
Ecological studies in the paper mill effluents and their impact on the river Tungabhadra: Heavy metals and algae 139
RNA
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203
Root exudates
Interactions between the root exudates of pearl millet and *Azospirillum brasilense* 237
RuBP carboxylase
Relationship of developing pods with photosynthetic characteristics of leaves in chick pea 333

Sclerotium
Acquired cycloheximide resistance in *Neurospora crassa* and *Sclerotium rolfsii* 417
SDH
Succinate dehydrogenase and peroxidase activities in leaf epidermis and stem of some angiosperm species growing near a fertilizer complex 129
Seed coat
Contribution to the embryology of *Calamintha umbrosa* Benth. 291
Seedling development
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
Seedling survival
Effect of established populations of two annual weeds on their newly emerged seedling cohorts 79
Seed morphology
Seed morphology in five species of *Biophytum* DC (Oxalidaceae) 17
Seed source
Variation in germination characteristics of some seed origins of *Pinus wallichiana* A B Jacks from the western Himalaya 441
Senescence
Relationship of developing pods with photosynthetic characteristics of leaves in chick pea 333
Sex differentiation
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203
Sex expression
Role of endogenous phytohormones and some macromolecules in regulation of sex differentiation in flowering plants 453
Shoot apex
Ontogeny of palmately compound leaves in angiosperms: I. *Tabebuia pentaphylla* Hense 429
Sodium chloride
Induction of hyphal branching in *Bipolaris sorokiniana* by sodium chloride 65
Solanum sysimbrifolium
Leaf-litter decomposition in arid to semi-arid climatic conditions 409
Sonchus oleraceous
Cytological studies in *Sonchus oleraceous* Linn. 373
Spore echinulation
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Spore shedding
Spore shedding in *Aglaothamnion cordatum* (Borgesen) Feldmann. Mazoyer—(Rhodophyta, Ceramiales) of Visakhapatnam coast 121
Sporogenesis
Contribution to the embryology of *Calamintha umbrosa* Benth. 291
Sr gene
A proposed system for virulence designation in India. 2. *Puccinia graminis* f sp *tritici* 29
Stabilisation pond
Fungi of wastewaters and stabilisation pond 263
Starch
Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L) 71
Stem rust
A proposed system for virulence designation in India. 2. *Puccinia graminis* f sp *tritici* 29

Stepwise multiple regression
Leaf-litter decomposition in arid to semi-arid climatic conditions 409
Stigma
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357
Stomatal character
The interrelationship of growth substances and stomatal characters in *Gossypium hirsutum* var H-777 21
Stomatal response
Stomatal response of chlorocholine chloride and indole-3-acetic acid in *Commelina communis* L. 167
Style
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357
Subtending leaves
Relationship of developing pods with photosynthetic characteristics of leaves in chick pea 333
Sucrose
Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L) 71
Sulphur dioxide
Effect of sulphur dioxide on growth and nodulation of pigeonpea 199

Tabebuia pentaphylla
Ontogeny of palmately compound leaves in angiosperms: 1. *Tabebuia pentaphylla* Hense 429
Taichung Native 1
Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) 181
Taxonomic significance
Seed morphology in five species of *Biophytum* DC (Oxalidaceae) 17
Taxonomy
The genus *Ramaria* in the Eastern Himalayas: Subgenera *Ramaria, Echinoramaria* and *Lentoramaria* 51
Genus *Ramaria* in the eastern Himalaya: Subgenus *Laeticolora*-I 271
Structure, distribution and taxonomic significance of trichomes in some *Indigofera* L. (Fabaceae) 309
Temperature
Environmental control of cell morphology in desmids 193
Testa
Comparative study on the seed of two major pulses vis-a-vis their common adulterant 283
Torilis arvensis
Reproductive biology of *Torilis arvensis* (Hudson) Link. 227
Total molybdenum
Effect of graded doses of molybdenum on the yield and uptake of molybdenum by soybean in some acid soils of Himachal Pradesh 341
Total non-structural carbohydrate
Influence of clipping and water stress on growth performance and nutrient value of four range grasses 389
Transitional apex
Zonation in the shoot apex of *Matthiola incana* R. Br. 349
Trapa
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
***Trapa natans* L. var. *bispinosa* (Roxb.) Makino**
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
Trichomes
Structure, distribution and taxonomic significance of trichomes in some *Indigofera* L. (Fabaceae) 309
***Triticum aestivum* L**
Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L) 71

Veinsheath syndrome
The veinsheath syndrome in Cunoniaceae I *Pancheria* Brongn. & Gris 87
The veinsheath syndrome in Cunoniaceae. II. The genera *Acsmithia, Codia, Cunonia, Geissois, Pullea* and *Weinmannia* 247
Vein termini cells
The veinsheath syndrome in Cunoniaceae. II. The genera *Acsmithia, Codia, Cunonia, Geissois, Pullea* and *Weinmannia* 247
Venation pattern
Cotyledonary architecture in some Asteraceae 7
Vesicular-arbuscular mycorrhiza
Response of groundnut (*Arachis hypogaea* L) to combined inoculation with *Glomus mosseae* and *Rhizobium* sp 35
Virulence analysis
A proposed system for virulence designation in India. 2. *Puccinia graminis* f sp *tritici* 29

Wastewaters
Fungi of wastewaters and stabilisation pond 263
Water stress
Influence of clipping and water stress on growth performance and nutrient value of four range grasses 389
Weed biology
Effect of established populations of two annual weeds on their newly emerged seedling cohorts 79

Xylem differentiation
Seedling anatomy of some Asclepiadaceae 147

Zonation
Zonation in the shoot apex of *Matthiola incana* R.Br. 349

AUTHOR INDEX

Agarwal A
see Srivastava S C 365
Alka Sharma (nee Panhotra)
see Bhambie S 295
Ambuja Pillai
see Goyal Vijay 349
Ananthakrishnan T N
see Raman A 103

Babu G V Sarat
see Bhatt S C 409
Bahadur Bir
see Farooqui S M 17
Bahadur P
A proposed system for virulence designation in India. 2. *Puccinia graminis* f sp *tritici* 29
Bhambie S
Ontogeny of cambium in *Amaranthus caudatus* L. and *Achyranthes aspera* L. 295
Bhargava Rakesh
see Koul A K 1
Bhatt S C
Leaf-litter decomposition in arid to semi-arid climatic conditions 409

Chakrabarti P
see Nandy P 437
Chennaveeraiah M S
see Hiremath B S 373
Crossley A
see Irving F 321

Dattachoudhury M
see Nandy P 437
Devi H Maheswari
see Lakshminarayana K 213
Dickison William C
see Rao T Ananda 87
see Rao T Ananda 247
Dubey J P
A new antheridiogen from the fern *Pityrogramma calomelanos* (L.) Link 173
Dwivedi N K
Contribution to the embryology of *Calamintha umbrosa* Benth. 291

Farooqui S M
Seed morphology in five species of *Biophytum* DC (Oxalidaceae) 17

Geeta Srivastava
see Udar Ram 303
Goel J P
see Veena Gupta 283
Gopinathan K
On the developmental morphology and histochemistry of the galls induced by an agromyzid on the stems of *Pongamia glabra* Vent. (Fabaceae) 95
Govil C M
Stomatal response of chlorocholine chloride and indole 3-acetic acid in *Commelina communis* L. 167
Goyal S C
see Satija S 147
Goyal Suresh Chand
see Goyal Vijay 349
Goyal Vijay
Zonation in the shoot apex of *Matthiola incana* R. Br. 349
Grover Anil
Relationship of developing pods with photosynthetic characteristics of leaves in chick pea 333
Gupta S K
Reproductive biology of *Torilis arvensis* (Hudson) Link. 227

Hamal I A
see Gupta S K 227
Hema Joshi
see Tewari Manjusha 41
Hema Pande
Influence of clipping and water stress on growth performance and nutrient value of four range grasses 389
Hiremath Annapurna B
Fungi of wastewaters and stabilisation pond 263
Hiremath B S
Cytological studies in *Sonchus oleraceous* Linn. 373

Inamdar J A
see Ravindranath K 7
Irving F
Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical 321
Iyengar E R R
see Prasad Vutukuri V 203

Jaiswal V S
Role of endogenous phytohormones and some macromolecules in regulation of sex differentiation in flowering plants 453
Janarthanam M K
see Suryanarayanan T S 65

Jayaraj Y M
see Hiremath Annapurna B 263
Joshi R N
see Savangikar C V 47

Koul A K
Impact of polyploidy on flavonoid constitution in *Narcissus tazetta* L. 1
see Gupta S K 227
Kulkarni A R
see Reddy G N 153
Kumar Aravind
see Jaiswal V S 453
Kumar B K Vijay
see Prabhakar M 309
Kumar Dinesh
see Srivastava S C 365
Kumar K E C Raja
Activity of isoproturon on leaf cell membrane permeability 405
Kumar Rakesh
Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L) 71

Lakshminarayana K
Embryological studies in Gentianaceae 213
Lal Madan
see Jaiswal V S 453
Lamba L C
see Veena Gupta 283
Last F T
see Irving F 321
Leelavathi P
see Prabhakar M 309

Masand S S
see Sharma C M 341
Mason P A
see Irving F 321
Minhas R S
see Sharma C M 341
Murty Y S
see Sharma R K 21
Muruganathan E A
see Periasamy K 429

Nagarajan S
see Bahadur P 29
Nandy P
RCA_1-mediated agglutination and fluidity of *Mimosa pudica* chloroplast envelope membrane 437
Natarajan K
see Irving F 321
Nayar S K
see Bahadur P 29
Nimbargi Prabhakar M
see Hiremath Annapurna B 263

Pandeya S C
see Bhatt S C 409
Parvathi K
Response of groundnut (*Arachis hypogaea* L) to combined inoculation with *Glomus mosseae* and *Rhizobium* sp 35
Patel J D
see Sakunthala Devi G 129
Periasamy K
Ontogeny of palmately compound leaves in angiosperms: 1. *Tabebuia pentaphylla* Hense 429
Philomena P A
Unusual germination and seedling development in two monocotyledonous dicotyledons 221
Pillai A
see Satija S 147
Prabhakar M
Structure, distribution and taxonomic significance of trichomes in some *Indigofera* L. (Fabaceae) 309
Prasad P
see Satyanarayana N V 199
Prasad Vutukuri V
Phenology and biochemical changes in male and female shrubs of Jojoba (*Simmondsia chinensis* (Link) Schneider) during different seasons 203

Rai J P N
Effect of established populations of two annual weeds on their newly emerged seedling cohorts 79
Rajalakshmi N
Influence of combined nitrogen on growth of cyanobacteria 315
Raman A
Cecidogenous *Crotonothrips* (Thysanoptera)—*Memecylon* interactions: Host relations, nutritive tissue, tissue dynamics and cecidogenetic patterns 103
Ramayya N
see Prabhakar M 309
Rangaiah Subba G
Spore shedding in *Aglaothamnion cordatum* (Borgesen) Feldmann. Mazoyer—(Rhodophyta, Ceramiales) of Visakhapatnam coast 121
Rao A S
see Parvathi K 35
Rao A V
see Venkateswarlu B 237
Rao K V Madhava
see Satyanarayana N V 199
Rao K R
see Kumar K E C Raja 405
Rao T Ananda
The veinsheath syndrome in Cunoniaceae I *Pancheria* Brongn. & Gris 87
The veinsheath syndrome in Cunoniaceae. II. The genera *Acsmithia, Codia, Cunonia, Geissois, Pullea* and *Weinmannia* 247

Ravindranath K
Cotyledonary architecture in some Asteraceae 7
Rawat M S
see Thapliyal R C 441
Reddy G N
Contributions to the anatomy of palm fruits—Cocosoid palms 153
Reddy P Manikya
Ecological studies in the paper mill effluents and their impact on the river Tungabhadra: Heavy metals and algae 139
Reddy R Balakrishna
see Kumar K E C Raja 405
Rose Maria
see Sullia S B 417
Roy S K
see Dubey J P 173

Sakunthala Devi G
Succinate dehydrogenase and peroxidase activities in leaf epidermis and stem of some angiosperm species growing near a fertilizer complex 129
Satija S
Seedling anatomy of some Asclepiadaceae 147
Satyanarayana N V
Effect of sulphur dioxide on growth and nodulation of pigeonpea 199
Savangikar C V
Fractional coagulation of proteins from alfalfa leaf juice by use of alum 47
Savangikar V A
see Savangikar C V 47
Shah C K
see Philomena P A 221
Sharda R M
see Thind K S 51
see Thind K S 271
Sharma C M
Effect of graded doses of molybdenum on the yield and uptake of molybdenum by soybean in some acid soils of Himachal Pradesh 341
Sharma M C
see Koul A K 1
Sharma R K
The interrelationship of growth substances and stomatal characters in *Gossypium hirsutum* var H-777 21
Shivanna K R
see Venkata Lakshmi K 357
Singh J S
see Hema Pande 389
Singh Randhir
see Kumar Rakesh 71
Sinha S K
see Grover Anil 333
Sood Sarvesh Kumar
Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) 379
Srivastava S C
see Udar Ram 303
The Status of *Plagiochasma intermedium* L. et G. in India 365
Subramanian D
Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) 181
Sullia S B
Acquired cycloheximide resistance in *Neurospora crassa* and *Sclerotium rolfsii* 417
Sundaram R
see Subramanian D 181
Suresh G
see Gopinathan K 95
Suryanarayanan T S
Induction of hyphal branching in *Bipolaris sorokiniana* by sodium chloride 65
Swamy N Rama
see Farooqui S M 17

Tewari Manjusha
Effect of nitrogen fertilizer on biomass and growth behaviour of two range grasses 41
Thapliyal R C
Variation in germination characteristics of some seed origins of *Pinus wallishiana* A B Jacks from the Western Himalaya 441
Thind K S
The genus *Ramaria* in the Eastern Himalayas: Subgenera *Ramaria, Echinoramaria* and *Lentoramaria* 51
Genus *Ramaria* in the eastern Himalaya: Subgenus *Laeticolora*-I 271
Tripathi R S
see Rai J P N 79

Udar Ram
Cololejeunea (Pedinolejeunea) furcilobulata (Berrie *et* Jones) Schuster: New to Asia 303
Uniyal D P
see Thapliyal R C 441

Veena Gupta
Comparative study on the seed of two major pulses vis-a-vis their common adulterant 283
Venkata Lakshmi K
Structure and cytochemistry of the pistil in *Arachis hypogaea* 357
Venkateswarlu B
Interactions between the root exudates of pearl millet and *Azospirillum brasilense* 237

Venkateswarlu K
see **Parvathi K**
Venkateswarlu V
see **Reddy P Manikya** 139

Vidyavati
35 **Environmental control of cell morphology in desmids** 193
Wilson J
see **Irving F** 321

5

Proceedings of the Indian Academy of Sciences
(Plant Sciences)

Volume 95, 1985

CONTENTS

Impact of polyploidy on flavonoid constitution in *Narcissus tazetta* L
A K Koul, M C Sharma and Rakesh Bhargava 1

Cotyledonary architecture in some Asteraceae
K Ravindranath and J A Inamdar 7

Seed morphology in five species of *Biophytum* DC (Oxalidaceae)
S M Farooqui, N Rama Swamy and Bir Bahadur 17

The interrelationship of growth substances and stomatal characters in *Gossypium hirsutum* var H-777 *R K Sharma and Y S Murty* 21

A proposed system for virulence designation in India. 2. *Puccinia graminis* f sp *tritici* *P Bahadur, S Nagarajan and S K Nayar* 29

Response of groundnut (*Arachis hypogaea* L) to combined inoculation with *Glomus mosseae* and *Rhizobium* sp
K Parvathi, K Venkateswarlu and A S Rao 35

Effect of nitrogen fertilizer on biomass and growth behaviour of two range grasses *Manjusha Tewari and Hema Joshi* 41

Fractional coagulation of proteins from alfalfa leaf juice by use of alum
C V Savangikar, V A Savangikar and R N Joshi 47

The genus *Ramaria* in the Eastern Himalayas: Subgenera *Ramaria, Echinoramaria* and *Lentoramaria* *K S Thind and R M Sharda* 51

Induction of hyphal branching in *Bipolaris sorokiniana* by sodium chloride
T S Suryanarayanan and M K Janarthanam 65

Assimilate supply in relation to grain weight in wheat (*Triticum aestivum* L)
Rakesh Kumar and Randhir Singh 71

Effect of established populations of two annual weeds on their newly emerged seedling cohorts *J P N Rai and R S Tripathi* 79

The veinsheath syndrome in Cunoniaceae I *Pancheria* Brongn & Gris
T Ananda Rao and William C Dickison 87

On the developmental morphology and histochemistry of the galls induced by an agromyzid on the stems of *Pongamia glabra* Vent. (Fabaceae)
K Gopinathan and G Suresh 95

Cecidogenous *Crotonothrips* (Thysanoptera)—*Memecylon* interactions: Host relations, nutritive tissue, tissue dynamics and cecidogenetic patterns
A Raman and T N Ananthakrishnan 103

Spore shedding in *Aglaothamnion cordatum* (Borgesen) Feldmann. Mazoyer—(Rhodophyta, Ceramiales) of Visakhapatnam coast *G Subba Rangaiah* 121

Succinate dehydrogenase and peroxidase activities in leaf epidermis and stem of some angiosperm species growing near a fertilizer complex *G Sakunthala Devi and J D Patel* 129

Ecological studies in the paper mill effluents and their impact on the river Tungabhadra: Heavy metals and algae *P Manikya Reddy and V Venkateswarlu* 139

Seedling anatomy of some asclepiadaceae *S Satija, S C Goyal and A Pillai* 147

Contribution to the anatomy of palm fruits-Cocosoid palms *G N Reddy and A R Kulkarni* 153

Stomatal responses of chlorocholine chloride and indole-3-acetic acid in *Commelina communis* L *C M Govil* 167

A new antheridiogen from the fern *Pityrogramma calomelanos* (L.) Link *J P Dubey and S K Roy* 173

Nitrate reduction and assimilation in rice plants (*Oryza sativa* L.) *D Subramanian and R Sundaram* 181

Environmental control of cell morphology in desmids *Vidyavati* 193

Effect of sulphur dioxide on growth and nodulation of pigeonpea *N V Satyanarayana, P Prasad and K V Madhava Rao* 199

Phenology and biochemical changes in male and female shrubs of Jojoba [*Simmondsia chinensis* (Link) Schneider] during different seasons *Vutukuri V Prasad and E R R Iyengar* 203

Embryological studies in Gentianaceae *K Lakshminarayana and H Maheswari Devi* 213

Unusual germination and seedling development in two monocotyledonous dicotyledons *P A Philomena and C K Shah* 221

Reproductive biology of *Torilis arvensis* (Hudson) Link *S K Gupta, I A Hamal and A K Koul* 227

Interactions between the root exudates of pearl millet and *Azospirillum brasilense* *B Venkateswarlu and A V Rao* 237

The veinsheath syndrome in *Cunoniaceae*. II. The genera *Acsmithia, Codia, Cunonia, Geissois, Pullea* and *Weinmannia* *T Ananda Rao and William C Dickison* 247

Fungi of wastewaters and stabilisation pond *Annapurna B Hiremath, Prabhakar M Nimbargi and Y M Jayaraj* 263

Genus *Ramaria* in the eastern Himalaya: Subgenus *Laeticolora*-I *K S Thind and R M Sharda* 271

Comparative study on the seed of two major pulses vis-a-vis their common adulterant *Veena Gupta, L C Lamba and J P Goel* 283

Contribution to the embryology of *Calamintha umbrosa* Benth *N K Dwivedi* 291

Ontogeny of cambium in *Amaranthus caudatus* L. and *Achyranthes aspera* L
S Bhambie and Alka Sharma (nee Panhotra) 295

Cololejeunea (*Pedinolejeunea*) *furcilobulata* (Berrie *et* Jones) Schuster: New to Asia *Ram Udar, Geeta Srivastava and S C Srivastava* 303

Structure, distribution and taxonomic significance of trichomes in some *Indigofera* L. (Fabaceae)
M Prabhakar, B K Vijay Kumar, N Ramayya and P Leelavathi 309

Influence of combined nitrogen on growth of cyanobacteria *N Rajalakshmi* 315

Characteristics of some species of *Laccaria*, a fungal genus of significance to forestry, temperate and tropical
F Irving, A Crossley, P A Mason, F T Last, J Wilson and K Natarajan 321

Relationship of developing pods with photosynthetic characteristics of leaves in chick pea *Anil Grover and S K Sinha* 333

Effect of graded doses of molybdenum on the yield and uptake of molybdenum by soybean in some acid soils of Himachal Pradesh
C M Sharma, R S Minhas and S S Masand 341

Zonation in the shoot apex of *Matthiola incana* R. Br.
Vijay Goyal, Suresh Chand Goyal and Ambuja Pillai 349

Structure and cytochemistry of the pistil in *Arachis hypogaea*
K Venkata Lakshmi and K R Shivanna 357

The Status of *Plagiochasma intermedium* L. et G. in India
S C Srivastava, Dinesh Kumar and A Agarwal 365

Cytological studies in *Sonchus oleraceous* Linn
B S Hiremath and M S Chennaveeraiah 373

Gametophytes, integuments initiation and embryogeny in *Microstylis cylindrostachya* (Orchidaceae, Epidendreae) *Sarvesh Kumar Sood* 379

Influence of clipping and water stress on growth performance and nutrient value of four range grasses *Hema Pande and J S Singh* 389

Activity of isoproturon on leaf cell membrane permeability
K E C Raja Kumar, R Balakrishna Reddy and K R Rao 405

Leaf-litter decomposition in arid to semi-arid climatic conditions
S C Bhatt, G V Sarat Babu and S C Pandeya 409

Acquired cycloheximide resistance in *Neurospora crassa* and *Sclerotium rolfsii*
S B Sullia and Rose Maria 417

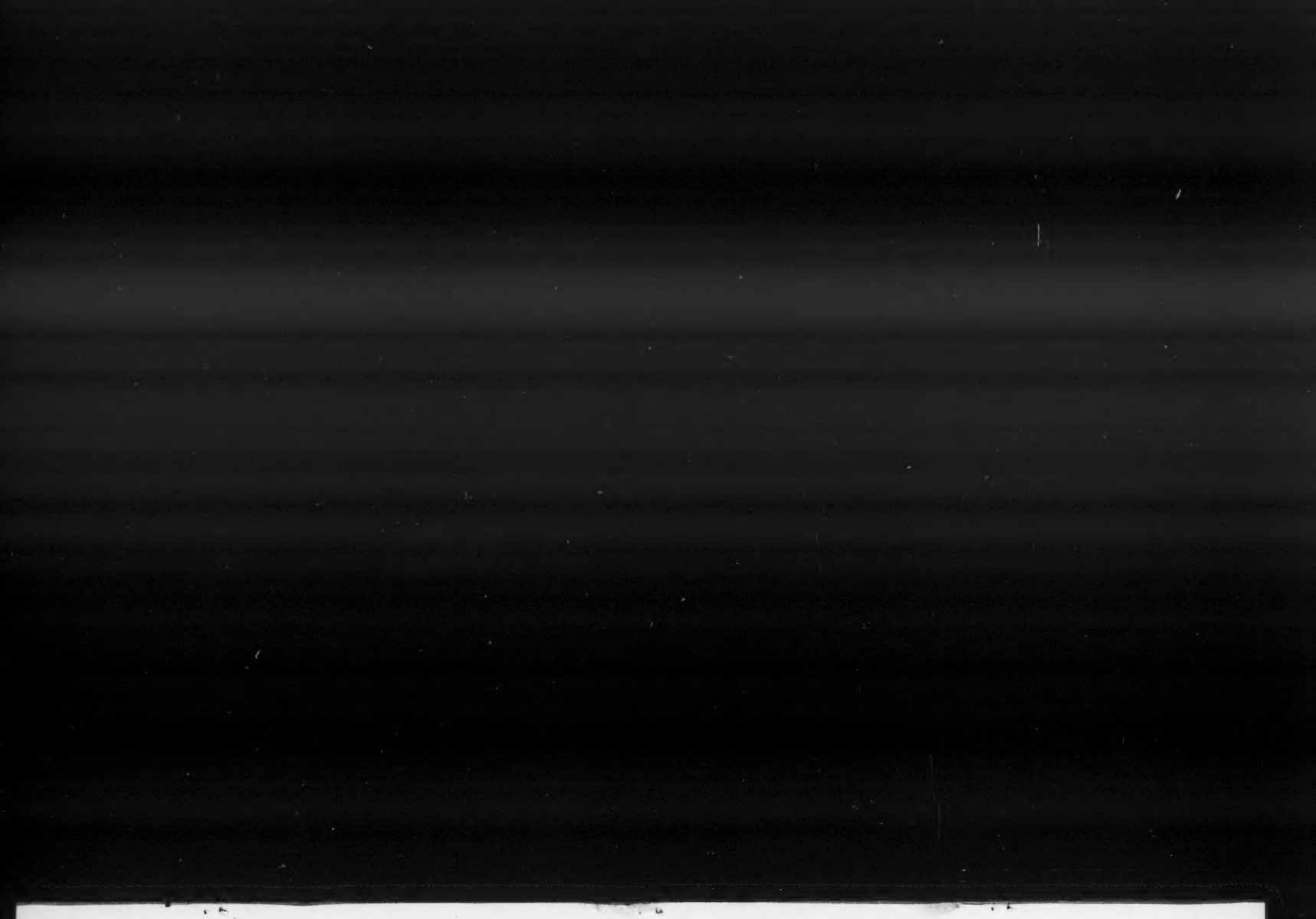
Ontogeny of palmately compound leaves in angiosperms: 1. *Tabebuia pentaphylla* Hense *K Periasamy and E A Muruganathan* 429

RCA_1-mediated agglutination and fluidity of *Mimosa pudica* chloroplast envelope membrane *P Nandy, M Dattachoudhury and P Chakrabarti* 437

Variation in germination characteristics of some seed origins of *Pinus wallichiana* A B Jacks from the western Himalaya
R C Thapliyal, D P Uniyal and M S Rawat 441

Review

Role of endogenous phytohormones and some macromolecules in regulation of sex differentiation in flowering plants
V S Jaiswal, Aravind Kumar and Madan Lal 453

Subject index 461

Author index 468